

JOHN ASHCROFT  
Governor

FREDERICK A. BRUNNER  
Director



STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE DIRECTOR  
P.O. Box 176  
Jefferson City, Missouri 65102  
Telephone 314-751-4422

April 18, 1988

0751  
asp  
Site: Syntex-Verona  
ID #: MD0007452154  
Break: 5.7  
Other: 4-18-88  
Division of Energy  
Division of Environmental Quality  
Division of Geology and Land Survey  
Division of Management Services  
Division of Parks, Recreation,  
and Historic Preservation

RECEIVED

APR 21 1988

Mr. Robert Morby  
U.S. EPA, Region VII  
726 Minnesota Avenue  
Kansas City, KS 66101

SUPERFUND BRANCH

Dear Mr. Morby:

The Department of Natural Resources (DNR) has reviewed the Environmental Protection Agency's (EPA's) proposed plan for the Syntex, Verona dioxin operable unit. We have several general comments to make first and then will provide comments referenced by page number.

GENERAL COMMENTS:

DNR believes incineration has been demonstrated to be a safe and effective method for destroying dioxin. DNR's objective has been to find a long-term permanent solution to the dioxin problem. DNR believes consideration of the opinions and reaction of local residents, as well as experts, is integral to the decision-making process. Therefore, DNR cannot endorse the proposal until all comments have been received and made available to DNR for review.

EPA is fairly vague on the types of land use restrictions needed for the cleanup being proposed. It appears that the only restriction necessary is to prevent future use as a residential area. Is this the only restriction necessary? Or are restrictions necessary to protect the soil cover?

The alternative to leave less than 20 ppb in place is sound relative to on-site soil stability as from erosion protection provided that:

- 1) Areas in grass have a scheduled fertilization and reseeding plan,
- 2) Grasses established be those that are known for erosion control, and
- 3) Bank stabilization be implemented and floodwater velocities reduced by development of tree lines in appropriate areas.

PAGE-SPECIFIC COMMENTS:

Page 2, paragraph 2 - The 1971 study cited was performed by the Division of Geology and Land Survey of DNR--at that time known as the Missouri Geological Survey and Water Resources.



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SUPERFUND RECORDS

Mr. Robert Morby  
April 18, 1988  
Page Two

Page 24, paragraph 2 - The last sentence implies that a petition is required to change the use of a property on the Registry. This may be overstating the process. Only a request to the department director is required. The correct citation for the Registry is "Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites."

Page 26 - paragraph 1 - To be consistent with the other ARARs, the solid waste citation should be "Missouri Solid Waste Management Law and Regulations."

Page 29 - Paragraph 2 - The statement that solid waste disposal would be regulated in accordance with Subtitle D of RCRA is incorrect. These wastes would be regulated in accordance with the requirements of the Missouri Solid Waste Law and Regulations only.

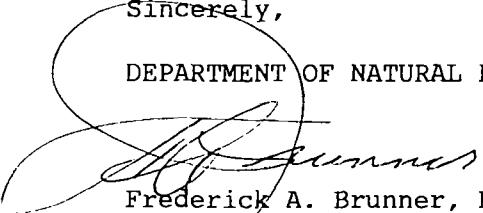
The provision of a "special waste" category has been misinterpreted. Special wastes are not solid wastes posing minimal potential for polluting groundwater, but are rather "any solid waste requiring handling other than normally used for municipal wastes." Special wastes can in fact have greater potential for groundwater contamination than municipal waste.

In addition to these comments, I have attached comments received from the Missouri Department of Conservation and the Missouri Department of Health.

Thank you for the opportunity to comment. We are prepared to cooperate with EPA in any way helpful to bring about a permanent solution at the Syntex, Verona facility without adversely affecting local residents. If you have any questions, please contact me.

Sincerely,

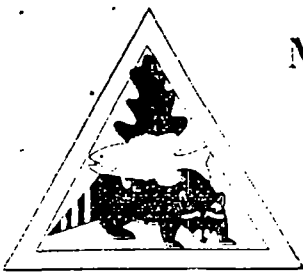
DEPARTMENT OF NATURAL RESOURCES



Frederick A. Brunner, Ph.D., P.E.  
Director

FAB/ksl

Attachments



# MISSOURI DEPARTMENT OF CONSERVATION

Fish and Wildlife Research Center • 1110 College Avenue

Columbia, Missouri 65201 • Phone 314/449-3761

JERRY J. PRESLEY, Director

March 21, 1988

Mr. John Young  
Deputy Director  
Department of Environmental Quality  
Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

Dear Mr. Young:

I have reviewed the Remedial Alternatives Report and Proposed Plan for the Syntex Verona Facility. My comments will be brief since I did not receive the report until March 18.

I will limit my comments to 2, 3, 7, 8-TCDD since it is the only contaminant which has been found in the Spring River. The basic concern at the Verona Syntex facility is off-site transport of contaminants. Despite an extensive record of where TCDD is located, the mechanisms of movement into the aquatic environment are yet unknown. Without this knowledge it is unreasonable to expect any attempt at cleanup at the Syntex facility short of complete removal of all contaminated soil to succeed. The major source of TCDD in the Spring River may not come from the areas of greatest contamination on the Syntex property. The remedial measures most adequately address the sites most highly contaminated. Some of the remedial measures proposed for the areas of low contamination which involve soil tillage may in fact lead to an increase in the amount of TCDD reaching the Spring River.

The occurrence of TCDD in the aquatic environment is not a trivial matter. Numerous studies have shown that aside from occupational exposure, food chain transport through the aquatic environment is the most significant component of human exposure and risk from TCDD. Public perception of risk in Verona may be somewhat misplaced in this respect. Most of the local concerns have been directed to where TCDD is located on Syntex property and some of the more unlikely ways which TCDD could move off the Syntex property. Significant risks to the local population are more likely associated with TCDD in the Spring River. The only proven mechanism of off-site transport of TCDD at Verona is by way of the Spring River.

The concentration of TCDD in the edible portion of fish from the Spring River has always been below the U.S. Food and Drug Administration advisory level. The advisory level is based on an average level of fish consumption. A state health advisory was issued for the Spring River because a particular group of

## COMMISSION

JEFF CHURAN  
Chillicothe

JAY HENGES  
Earth City

JOHN POWELL  
Rolla

RICHARD REED  
East Prairie

March 21, 1988

anglers (giggers) were catching and consuming large quantities of fish. Other than those employed at the Verona plant during manufacture of 2, 4, 5-T and hexachlorophene, anglers are probably at greatest risk to TCDD exposure.

One additional unresolved question pertains to groundwater movement from the lagoon area to the Spring River. A previous dye trace performed by DNR showed rapid movement to the Spring River. Syntex has stated this dye trace was incorrect and reported much slower groundwater movement. I would like to see this dye trace redone to resolve this discrepancy.

If I can be of further assistance, please call.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ron Crunkilton".

Ron Crunkilton, Biologist  
Water Quality Research

RC:aa

cc: Mr. DiStefano



M E M O R A N D U M

To: John Young, Deputy Director  
Division of Environmental Quality  
Department of Natural Resources

From: John R. Bagby, Jr., Ph.D. *JRB*  
Director  
Division of Environmental Health & Epidemiology

Subject: Remedial Alternative Report and Proposed Plan for  
Syntex Verona Facility

Date: March 16, 1988

We have reviewed the proposed remedial plan for the Syntex Plant, as requested. The proposal speaks to each individual area where contamination has been documented at the facility, and presents a remediation for each area. Proposal recommendations for the facility under 4.0 of the document meet clean-up standards for industrial/commercial sites. Thus, we agree with the proposal as currently written.

If there are any questions, please contact me at 751-6080.

JRB:DWR:pb